Claims

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- 1. (Amended) A disk array controller, characterized in that it comprises:
- a channel interface package in which at least a channel interface unit with a host computer and an access path interface unit are packaged;
- a disk interface package in which at least a disk interface with a disk drive and an access path interface unit are packaged; and
- a memory package in which a memory unit for storing control data for the disk drive and an access path interface unit are packaged, and

that connections are made between the access path interface unit in the channel interface package and the access path interface unit in the memory package and between the access path interface unit in the disk interface package and the access path interface unit in the memory package by cables.

2. (Amended) The disk array controller as defined in claim

1, characterized in that it has plural said memory packages

and

that connections are made between the access path interface unit in the channel interface package and the access path interface unit in each of the plural memory

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packages, and between the access path interface unit in the disk interface package and the access path interface unit in each of the plural memory packages by cables.

- 3. (Amended) The disk array controller as defined in claim
- 2, characterized in that the plural memory packages are interconnected by cables.
- 4. (Amended) The disk array controller as defined in claim
- 2, characterized in that the memory units packaged in the plural memory packages store the same data.
- 5. (Amended) The disk array controller as defined in claim
- 2, characterized in that power is supplied from different power supplies to the plural memory packages.
- 6. (Amended) The disk array controller as defined in claim
- 1, characterized in that the channel interface package and the disk interface package are mounted on a platter.
- 7. (Amended) The disk array controller as defined in claim
- 1, characterized in that the channel interface package and the disk interface package are mounted on different platters.
- 8. A disk array controller, characterized in that it comprises:

an interface package in which at least a channel interface unit with a host computer and an access path interface unit are packaged;

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a disk interface package in which at least a disk interface with a disk drive and an access path interface unit are packaged; and

a cache memory package in which a cache memory unit for temporarily storing data to be recorded into the disk drive and an access path interface unit are packaged, and

that connections are made between the access path interface unit in the channel interface package and the access path interface unit in the cache memory package and between the access path interface unit in the disk interface package and the access path interface unit in the cache memory package by cables.

9. (Amended) The disk array controller as defined in claim 8, characterized in that it has plural said cache memory packages and

that connections are made between the access path interface unit in the channel interface package and the access path interface unit in each of the plural cache memory packages and between the access path interface unit in the disk interface package and the access path interface unit in each of the plural memory packages by cables.

10. (Amended) The disk array controller as defined in claim 9, characterized in that the plural cache memory packages are interconnected by cables.

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- 11. (Amended) The disk array controller as defined in claim
- 9, characterized in that the cache memory units mounted in the plural cache memory packages store the same data.
- 12. (Amended) The disk array controller as defined in claim 9, characterized in that power is supplied from different
- power supplies to the plural cache memory packages.
- 13. A disk array controller, characterized in that it comprises

an interface platter on which a channel interface unit to be connected with a host computer and a disk interface unit to be connected with a disk drive are mounted;

- a memory platter on which a memory unit for storing control data for the disk drive is mounted;
- a cable which connects the interface platter and the memory platter; and
- a selector unit, connected with the channel interface unit, the disk interface unit and the memory unit, which selects requests from the channel interface unit and the disk interface unit.
- 14. The disk array controller as defined in claim 13, characterized in that the selector unit is mounted on the interface platter.
- 15. The disk array controller as defined in claim 14, characterized in that the selector unit and the memory unit are connected.

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The disk array controller as defined in claim 13, characterized in that the selector unit is mounted on the reverse of the surface on which the channel interface unit and the disk interface unit are mounted.

17. (Deleted)

18. A disk array controller, characterized in that it comprises:

an interface platter on which a channel interface unit to be connected with a host computer and a disk interface unit to be connected with a disk drive are mounted;

a memory platter on which a cache memory unit for storing data to be recorded into the disk drive is mounted;

a cable which connects the interface platter and the memory platter; and

a selector unit, connected with the channel interface unit, the disk interface unit and the cache memory unit, which selects requests from the channel interface unit and the disk interface unit.

- 19. The disk array controller as defined in claim 18, characterized in that the selector unit is mounted on the interface platter.
- 20. The disk array controller as defined in claim 19, characterized in that the selector unit and the memory unit are connected.

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21. The disk array controller as defined in claim 19, characterized in that the selector unit is mounted on the reverse of the surface on which the channel interface unit and the disk interface unit are mounted.

22. A disk array controller, characterized in that it comprises:

plural platters on each of which a channel interface unit to be connected with a host computer, a disk interface to be connected with a disk drive and a memory unit for storing control data for the disk drive are mounted; and a cable which interconnects the plural platters;

23. The disk array controller as defined in claim 22, characterized in that the cables include a cable which connects the channel interface unit or the disk interface unit on one of the plural platters, with the memory unit on another one of the plural platters.

- 24 (Amended) The disk array controller as defined in claim 22, characterized in that it has a selector unit, connected with the channel interface unit, the disk interface unit and the memory unit which are mounted on one of the plural platters, which selects requests from the channel interface unit and the disk interface unit.
- 25. The disk array controller as defined in claim 24, characterized in that the selector unit is mounted on the platter.

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26. The disk array controller as defined in claim 24, characterized in that the selector unit is connected with the channel interface unit and the disk interface unit which are mounted on another one of the plural platters.

27. A disk array controller, characterized in that it comprises:

plural platters on each of which a channel interface unit to be connected with a host computer, a disk interface to be connected with a disk drive and a cache memory unit for storing data to be recorded into the disk drive are mounted;

cables which interconnect the plural platters; and

a selector unit, connected with the channel interface unit, the disk interface unit and the cache memory unit which are mounted on one of the plural platters, which selects requests from the channel interface unit and the disk interface unit.

- 28. The disk array controller as defined in claim 27, characterized in that the selector unit is mounted on the platter.
- 29. The disk array controller as defined in claim 27, characterized in that the selector unit is connected with the channel interface unit and the disk interface unit which are mounted on another one of the plural platters.
- 30. A disk array controller, characterized in that it comprises:

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a first platter on which a channel interface to be connected with a host computer is mounted;

a second platter on which a disk interface unit to be connected with a disk drive is mounted;

a third platter on which a memory unit for storing control data for the disk drive is mounted;

a cable which connects the first and third platters; and a cable which connects the second and third platters.

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31. The disk array controller as defined in claim 30, characterized in that it has:

a fourth platter on which a cache memory unit for storing data to be recorded into the disk drive is mounted;

a cable which connects the first and fourth platters; and

a cable which ackslashconnects the second and fourth platters.

- 32. (Deleted)
- 33. (Deleted)
- 34. (Deleted)
- 35. (Deleted)

36. (Amended) A disk array controller, characterized in that it comprises:

an interface platter on which a channel interface to be connected with a host computer and a disk interface unit to be connected with a disk drive are mounted; and

a memory platter on which a memory unit for storing control data for the disk drive is mounted,

wherein the interface platter is perpendicular to the memory platter.

37. A disk array controller, characterized in that it comprises:

plural interface platters on each of which a channel interface unit to be connected with a host computer and a

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disk interface unit to be connected with a disk drive are mounted; and

a memory platter on which a memory unit for storing control data for the disk drive is mounted,

wherein the memory platter is located between the plural interface platters.

38. A disk array controller, characterized in that it comprises:

plural platters on each of which a channel interface unit to be connected with a host computer, a disk interface unit to be connected with a disk drive and a memory unit for storing control data for the disk drive are mounted,

wherein one of the plural platters is located above another one of the plural platters.

- 39. The disk array controller as defined in claim 38, characterized in that said one platter and said other platter are vertical.
- 40. (Deleted)
- 41. Amended) A disk array controller, characterized in that it comprises:

an interface platter on which a channel interface unit to be connected with a host computer and a disk interface unit to be connected with a disk drive are mounted; and

a memory platter on which a cache memory unit for storing data to be recorded into the disk drive is mounted,

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wherein the interface platter is perpendicular to the memory platter.

42. A disk array controller, characterized in that it comprises:

plural interface platters on each of which a channel interface to be connected with a host computer and a disk interface to be connected with a disk drive are mounted; and a memory platter on which a cache memory unit for storing data to be recorded into the disk drive is mounted,

wherein the memory platter is located between the plural interface platters.